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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,693	03/30/2001	Joy Roberts	12015US05	8035

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10/25/2002

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EXAMINER

CREPEAU, JONATHAN

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 10/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,693

Applicant(s)

ROBERTS ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3,4. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "a predetermined threshold value." The instant specification gives no guidance or suggestion as to how this value may be derived or ascertained. Accordingly, this limitation is considered to be indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claim 2-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilkinson et al (U.S. Patent 6,096,448). Regarding claim 2, in column 7, lines 40-56, the reference discloses a

method of operating a solid polymer electrolyte fuel cell apparatus comprising the steps of supplying an oxidant stream from an oxidant supply system to the cathode, supplying a fuel stream from a fuel supply system to the anode, and monitoring a temperature parameter indicative of the operating temperature of the fuel cell. The duration or frequency of anode fuel starvation may be adjusted responsive to the temperature parameter using a control system. Regarding claims 3 and 4, the control system may comprise apparatus for intermittently interrupting the supply of fuel, or an apparatus for connecting a transient electrical load to draw power from the fuel cell (see col. 5, lines 13-21 and 51-58). Regarding claim 2, although the reference does not expressly teach the presence of a temperature "sensor," such an apparatus would inherently be present in the system of Wilkinson et al. to carry out the monitoring of the temperature parameter.

Thus, the instant claims are anticipated.

5. Claims 2-4 are provisionally rejected under 35 U.S.C. 102(e) as being anticipated by copending Application No. 09/344,763 (future U.S. Patent 6,472,090), which has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e), if published under 35 U.S.C. 122(b) or patented. This provisional rejection under 35 U.S.C. 102(e) is based upon a presumption of future publication or patenting of the copending application.

Regarding claim 2, on page 19, the copending application discloses a method of operating a solid polymer electrolyte fuel cell apparatus comprising the steps of supplying an oxidant stream from an oxidant supply system to the cathode, supplying a fuel stream from a fuel supply system to the anode, and monitoring a temperature parameter indicative of the operating temperature of the fuel cell. The duration or frequency of cathode oxidant starvation may be adjusted responsive to the temperature parameter using a control system. Regarding claims 3 and 4, the control system may comprise apparatus for intermittently interrupting the supply of fuel, or an apparatus for connecting a transient electrical load to draw power from the fuel cell (see pages 10-13). Regarding claim 2, although the application does not expressly teach the presence of a temperature "sensor," such an apparatus would inherently be present in the system of the application to carry out the monitoring of the temperature parameter.

This provisional rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

This rejection may not be overcome by the filing of a terminal disclaimer. See *In re Bartfeld*, 925 F.2d 1450, 17 USPQ2d 1885 (Fed. Cir. 1991).

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

Art Unit: 1745

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-39 of U.S. Patent No. 6,096,448 (Wilkinson et al.) in view of Kawatsu (U.S. Patent 5,677,073). The differences between claim 1 of the instant application and the claims of the Wilkinson et al. patent are the steps of monitoring of a temperature parameter indicative of the operating temperature of the fuel cell, and starving at least a portion of one of the electrodes when the temperature parameter is below a predetermined threshold value. However, Kawatsu is directed to methods for detecting and reversing the poisoning of an anode electrocatalyst (see abstract). In column 8, line 7, the reference teaches that the anode temperature decreases on places with higher degrees of poisoning. Therefore, the artisan would be motivated by the disclosure of Kawatsu to modify the method of the claims of Wilkinson et al. to include the steps of monitoring a temperature and initiating corrective action (i.e., fuel starvation) when the temperature falls below a predetermined value. The claims of Wilkinson et al. and the disclosure Kawatsu are both concerned with methods of reversing CO poisoning on fuel cell anodes. Therefore, the artisan would look to the patent of Kawatsu for the specific parameters (i.e., temperature) that correspond to electrocatalyst poisoning, and would be

motivated to modify the method of the claims of Wilkinson et al. so as to result in a method that incorporates the relevant parameters.

Allowable Subject Matter

8. Claim 1 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action and if the above-noted obviousness-type double patenting rejection is overcome.

9. The following is a statement of reasons for the indication of allowable subject matter:


Wilkinson et al (U.S. Patent 6,096,448) is the closest prior art to claim 1. However, as noted above, Wilkinson et al. fail to disclose the specific step of starving at least a portion of one of the electrodes when a temperature parameter is below a predetermined threshold value. Since the Wilkinson et al. reference qualifies as prior art under 35 USC §102(e) and is therefore not available for use in an obviousness rejection pursuant to 35 USC §103(c), claim 1 contains allowable subject matter.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (703) 305-0051. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (703) 308-2383. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900. Additionally, documents may be faxed to (703) 305-5408 or (703) 305-5433.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


JSC
October 22, 2002

JSC

October 22, 2002